a.) Amendment to the Claims

1. (Previously Presented) A method for producing a neural crest cell or a neural tube cell, comprising:

culturing an embryonic stem cell *in vitro* (i) in the absence of retinoic acid and (ii) in the presence of a stroma cell recognized by a monoclonal antibody produced by hybridoma FERM BP-7573 without forming embryoid body for a time period from 1 day to 14 days; and then

culturing continuously the cell *in vitro* (iii) in the absence of retinoic acid and (iv) in the presence of both BMP-4 and a stroma cell recognized by a monoclonal antibody produced by hybridoma FERM BP-7573 without forming embryoid body.

Claims 2-14 (Cancelled).

15. (Previously Presented) The method according to any one of claims 1, 80 or 81, which further comprises culturing under serum-free culture conditions.

Claims 16-17 (Cancelled)

18. (Previously Presented) The method according to any one of claims 1, 80 or 81, wherein the stroma cell is a stroma cell whose proliferation potency is deleted by a physicochemical treatment.

19. (Previously Presented) The method according to any one of claims 1, 80 or 81, wherein the stroma cell is a stroma cell whose proliferative potency is deleted by an antitumor agent, irradiation or pathologic tissue fixative.

20. (Previously Presented) The method according to claim 18, wherein the physiocochemical treatment is an antitumor agent selected from the group consisting of mitomycin C, 5-fluorouracil, adriamycin and methotrexate.

21. (Previously Presented) The method according to any one of claims 1, 80 or 81, wherein the stroma cell is a stroma cell whose proliferative potency is deleted by a microwave fixation, a rapid freeze-substitution fixation, a glutaraldehyde fixation, a p-formaldehyde fixation, a formalin fixation, an acetone fixation, a Van fixation, a periodic acid fixation, a methanol fixation or an osmic acid fixation.

Claim 22 (Cancelled).

23. (Previously Presented) The method according to any one of claims 1,-80 or 81, wherein the stroma cell is selected from the group consisting of: a fetal primary culture fibroblast; an SIHM mouse-derived STO cell; a mouse fetus-derived NIH/3T3 cell; an M-CSF deficient mouse calvaria-derived OP9 cell; a mouse calvaria-derived MC3T3-G2/PA6 cell; an embryonic stem cell-derived stroma cell; and a bone marrow mesenchymal stem cell-derived stroma cell.

24. (Previously Presented) The method according to any one of claims 1, 80 or 81, wherein the embryonic stem cell is selected from the group consisting of:

(a) an embryonic stem cell established by culturing an early embryo before implantation;

(b) an embryonic stem cell established by culturing an early embryo produced by nuclear transplantation of the nucleus of a somatic cell; and

(c) an embryonic stem cell in which a gene on the chromosome of the embryonic stem cell of (a) or (b) is modified using gene engineering.

Claims 25-71 (Cancelled).

72. (Previously Presented) The method according to claim 24, wherein the stroma cell is MC3T3-G2/PA6, OP9 or NIH3T3.

Claim 73 (Cancelled)

74. (Previously Presented) The method according to claim 23, wherein the embryonic stem cell is selected from the group consisting of:

(a) an embryonic stem cell established by culturing an early embryo before implantation;

(b) an embryonic stem cell established by culturing an early embryo produced by nuclear transplantation of the nucleus of a somatic cell; and

(c) an embryonic stem cell in which a gene on the chromosome of the embryonic stem cell of (a) or (b) is modified using gene engineering.

75. (Previously Presented) The method according to claim 74, wherein the stroma cell is recognized by a monoclonal antibody produced by hybridoma FERM BP-7573.

Claims 76-79 (Cancelled).

80. (Previously Presented) A method for producing a dopaminergic neuron, an acetylcholinergic neuron, a γ-aminobutyratergic neuron or a serotonergic neuron, comprising:

culturing an embryonic stem cell *in vitro* (i) in the absence of retinoic acid and (ii) in the presence of a stroma cell recognized by a monoclonal antibody produced by hybridoma FERM BP-7573 without forming embryoid body.

81. (Previously Presented) A method for producing a neural stem cell which is stained by an anti-nestin antibody comprising:

culturing for a time period from 1 to 14 days an embryonic stem cell *in vitro* (i) in the absence of both retinoic acid and BMP-4 and (ii) in the presence of a stroma cell recognized by a monoclonal antibody produced by hybridoma FERM BP-7573 without forming embryoid body.

82. (Currently Amended) The production method according to claim 1, wherein the ~~cell is~~ method produces said neural crest cell.

83. (Currently Amended) The production method according to claim 1, wherein the ~~cell is~~ method produces said neural tube cell.

84. (Currently Amended) The production method according to claim 80, wherein the ~~neuron is~~ method produces said dopaminergic neuron.

85. (Currently Amended) The production method according to claim 80, wherein the ~~neuron is~~ method produces said acetylcholinergic neuron.

86. (Currently Amended) The production method according to claim 80, wherein the ~~neuron is~~ method produces said γ-aminobutyratergic neuron.

87. (Currently Amended) The production method according to claim 80, wherein the ~~neuron is~~ method produces said serotonergic neuron.